



**NATIONAL  
AEROSPACE  
LABORATORIES**

Class : Restricted

No. of Copies : 3

**Title: ON FIELD INSPECTION OF HANSA-3 AIRCRAFT (VT-HNS)  
AT IIT - KANPUR**

*Author / s* : M Rajendra Praksh, RMVGK Rao

*Division* : FRP Div.

*NAL Project No.* : Z-8-106

*Document No.* : PDRP0708

*Date of Issue* : May 2007

<i>Contents</i>	1	<i>Pages</i>	7	<i>Figures</i>	05	<i>Tables</i>	1	<i>Annexures</i> : ---
-----------------	---	--------------	---	----------------	----	---------------	---	------------------------

*External Participation* : Nil

*Sponsor* : IIT-Kanpur

*Approval*: Head, FRP Division

*Remarks* : --

**Keywords:** Wood pecker, NDT, Composite Components

National Aerospace Laboratories has supplied the indigenous developed HANSA -3 Aircraft to various flying clubs in the country. One such aircraft was supplied to Indian Institute of Technology, Kanpur, during April 16<sup>th</sup> 2000. As per DGCA regulations, periodic inspection and maintenance need to be carried out on these aircrafts. The aircraft VT-HNS IIT-Kanpur has completed 5 years of service life. Hence it was required to carry out some mandatory checks and tests to re certify the aircraft for flying. In this context one of the checks to be carry out on the aircraft structure is Non Destructive Testing for which Fibre Reinforced Plastic Division is responsible.

NDT tests was carried out using Woodpecker (WP-632M) on this VT-HNS HANSA-3 Aircraft during May 17<sup>th</sup> to 25<sup>th</sup> 2007. While carrying out NDT, the measurement and marking of the defect zones were done in real time, rather than storing the data and post - processing. This procedure is adapted for all the components of the Aircraft. The adapted method is highly useful for field applications where the repair disposition can be given immediately and the repair of the damaged part can be taken up without delay. Results of the test revealed that there was no damage on the aircraft structure and it was cleared for further flights from NDT viewpoint.